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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,278	10/31/2003	Shigeki Yabu	02910.000098	8435

5514 7590 04/04/2007
FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

NGUYEN, JENNIFER T

ART UNIT	PAPER NUMBER
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2629

MAIL DATE	DELIVERY MODE
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04/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

Supplemental

Notice of Allowability

Application No.

10/697,278

Applicant(s)

YABU ET AL.

Examiner

Jennifer T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/9/07
2. ☒ The allowed claim(s) is/are 1-10 and 12-22.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____

7. ☒ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____


RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Malpede on 3/26/07.

Please amend Claims 1, 13, 15, 17, 18 and 22 as follows.

1. (Currently Amended) A display device comprising:

a display panel having cathodes, gates, and ~~anodes~~ an anode in which said cathodes and said gates are connected in a matrix manner;

an electron emitter which emits electrons in a state where a voltage is applied only between said cathodes and said ~~anodes~~ anode and which is provided with said ~~eachode~~ cathodes;

in which display of a plurality of pixels in said display panel is performed under a dark state by stopping electron emission from said electron emitter for said ~~anodes~~ anode by applying a stop voltage between said cathodes and said gates, and control means which controls operation of a circuit for driving a display panel in such a way that a potential of ~~each of said anodes~~ anode becomes not less than a threshold value potential by which a potential of ~~each of said anodes~~ anode can perform electron emission from said electron emitter after a predetermined time elapse from starting of application of a drive voltage which provides a specified display state or the stop voltage

between said cathodes and said gates when a display starting signal is generated.

13. (Currently Amended) A drive control method for a display device having a display panel having cathodes, gates, and ~~anodes~~ an anode in which said cathodes and said gates are connected in a matrix manner, and an electron emitter which emits electrons in a state where a voltage is applied only between said cathodes and said ~~anodes~~ anode and which is provided with said ~~cathode~~ cathodes, in which display of pixels of said display panel is performed under a dark state by stopping electron emission from said electron emitter for said ~~anodes~~ anode by applying a stop voltage between said cathodes and said gates,

said method comprising:

an application step of applying the stop voltage or a drive voltage which provides a specified display state between said cathodes and said gates when a display starting signal is generated; and

an anode voltage supplying step of allowing a potential of said anode not to be less than a threshold value potential which emits electrons from said electron emitter after a predetermined time elapse from starting of said application step.

15. (Currently Amended) A display device comprising:

a display panel having cathodes, gates, and ~~anodes~~ an anode respectively connected to a cathode driving circuit, a gate driving circuit, and an anode power source circuit, in which said cathodes and said gates are connected in a matrix manner; an

electron emitter which emits electrons in a state where a voltage is applied only between said ~~eathode~~ cathodes and said anode, said electron emitter being provided with said ~~eathode~~ cathodes, in which display of a plurality of pixels in said display panel is performed under a dark state by stopping electron emission from said electron emitter to said ~~anodes~~ anode by applying a stop voltage between said cathodes and said gates; and a control circuit which controls said cathode driving circuit, said gate driving circuit, and said anode power source circuit,

wherein said control circuit outputs a display starting signal to said cathode driving circuit, said gate driving circuit, and said anode power source circuit, and controls operations of circuits for driving the display panel in such a way that a potential of ~~each~~ of said ~~anodes~~ anode becomes not less than a threshold value potential by which said potential of ~~each~~ of said ~~anodes~~ anode can perform electron emission from said electron emitter after a predetermined time elapse from starting of application of a drive voltage which provides a specified display state or the stop voltage between said cathodes and said gates after a predetermined time elapse from a time at which the display starting signal is outputted after potentials of said cathode and said gate are kept at a same potential.

17. (Currently Amended) A drive control method of a display device having a display panel having cathodes, gates, and ~~anodes~~ an anode in which said cathodes and said gates are connected in a matrix manner; an electron emitter which emits electrons in a state where a voltage is applied only between said cathodes and said ~~anodes~~ anode, said electron emitter being provided with said cathode, in which display of a plurality of

pixels in said display panel is performed under a dark state by stopping electron emission from said electron emitter to said ~~anodes~~ anode by applying a stop voltage between said cathodes and said gates, said method comprising:

a step of generating a display starting signal;

an application step of applying a drive voltage which provides said stop voltage or a specified display state between said cathodes and said gates after a predetermined time elapse from a time at which the display starting signal is generated after potentials of said ~~eathode~~ cathodes and said gates are kept at a same potential; and

an anode potential supplying step of allowing a potential of ~~each of said anodes~~ anode not to be less than a threshold value potential which emits electrons from said electron emitter after a predetermined time elapse from starting of said application step.

18. (Currently Amended) A display device comprising:

a display panel having cathodes, gates, and ~~anodes~~ an anode respectively connected to a cathode driving circuit, a gate driving circuit, and an anode power source circuit, in which said cathodes and said gates are connected in a matrix manner; an electron emitter which emits electrons in a state where a voltage is applied only between said ~~eathode~~ cathodes and said anode, said electron emitter being provided with said ~~eathode~~ cathodes, in which display of a plurality of pixels in said display panel is performed under a dark state by stopping electron emission from said electron emitter to said ~~anodes~~ anode by

applying a stop voltage that a potential of each of said gates is lower than a potential of each of said cathodes between said cathodes and said gates; and

a control circuit which controls said cathode driving circuit, said gate driving circuit, and said anode power source circuit,

wherein said control circuit outputs a display starting signal to said cathode driving circuit, said gate driving circuit, and said anode power source circuit, and controls operations of circuits for driving the display panel in such a way that a potential of ~~each of said anodes~~ anode becomes not less than a threshold value potential necessary to perform electron emission from said electron emitter by the potential of ~~each of said anodes~~ anode after a predetermined time elapse from starting of application of the stop voltage between said cathodes and said gates of all pixels of said display panel at the same time after a predetermined time elapse from a time at which the display starting signal is outputted after potentials of of said ~~eathode~~ cathodes and said ~~gate~~ gates are kept at a same potential.

22. (Currently Amended) A drive control method of a display device having a display panel having cathodes, gates, and ~~anodes~~ an anode, in which said cathodes and said gates are connected in a matrix manner; an electron emitter which emits electrons in a state where a voltage is applied only between and said ~~eathode~~ cathodes said ~~anodes~~ anode, said electron emitter being provided with said ~~eathode~~ cathodes, in which display of each of pixels is performed under a dark state by stopping electron emission from said electron emitter to said ~~anodes~~

anode by applying a stop voltage that a potential of each of said gates is lower than a potential of each of said cathodes between and said gates, said method comprising:

a step of generating a display starting signal;

an application step of applying a stop voltage between said cathodes and said gates of all pixels of said display panel at the same time after a predetermined time elapse from a time at which the display starting signal is generated after potentials of said ~~eathode~~ cathodes and said ~~gate~~ gates are kept at a same potential; and

an anode potential supplying step of allowing a potential of said ~~anodes~~ anode not to be less than a threshold value potential necessary to perform electron emission from said electron emitter after a predetermined time elapse from starting of said application step

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer T. Nguyen whose telephone number is 571-272-7696. The examiner can normally be reached on Mon-Fri: 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Nguyen
3/26/07

A handwritten signature in black ink, appearing to read 'R. Hjerpe', with a stylized flourish at the end.

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600